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10/829,164

04/22/2004

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EXAMINER

RICKMAN, HOLLY C

ART UNIT

PAPER NUMBER

1773

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/829,164

Applicant(s)

GIRT ET AL.

Examiner

Holly Rickman

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-11, 21-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-13, 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. The objection to claim 15 is withdrawn in view of Applicant's amendments

Claim Rejections - 35 USC § 112

2. The rejection of claim 15 is withdrawn in view of Applicant's amendments.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 12-13, 16-17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Oikawa et al. (US 2003/0087131).

Oikawa et al. disclose a magnetic recording medium having a bcc (200) nonmagnetic base layer, an hcp [1120] intermediate layer and a [1120] hcp granular magnetic layer thereon. See paragraphs [0016]-[0017], [0030], [0033]. With respect to claim 13, the examiner notes that Oikawa et al. discloses a comparative example meeting all of the limitations of this claim (see Fig.2 and description of Fig. 2 in paragraphs [0046]-[0047]).

The examiner maintains that the granular structure taught by Oikawa et al. meets the limitations of claims 16-17.

With respect to claim 19, the structure taught by Oikawa et al. is substantially the same as the claimed structure but does not explicitly disclose the claimed full-width at a half-maximum of a rocking curve of the granular magnetic layer. It is the examiner's contention that Oikawa et al. inherently satisfies this limitation of the claims by virtue of the fact that it discloses the same structure as claimed and therefore, would be expected to exhibit the same properties.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The rejection of claims 12-13, 15-17, and 19 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6759149) in view of Oikawa et al. (US 2003/0138671) is withdrawn in view of Applicant's arguments. The examiner notes that Chen et al. does not qualify as prior art under 103(c).

7. The rejection of claim 14 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6759149) in view of Oikawa et al. (US 2003/0138671) further in view of Do et al. (US 6723450) is withdrawn in view of Applicant's amendments.

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8. The rejection of claims 18 and 20 under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6759149) in view of Oikawa et al. (US 2003/0138671) further in view of Bian et al. (US 6858331) is withdrawn in view of Applicant's arguments.

9. Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa et al. (US 2003/0087131) in view of Bian et al. (US 6858331).

Oikawa teaches all of the limitations of the claim, as detailed above, except for the claimed Mrt orientation ratio (OR-Mrt) and the use of a textured substrate.

Bian et al. teaches that it is known in the art to improve magnetic performance by texturing a substrate and thereby providing an improved OR-Mrt of greater than 1. See col. 2, lines 31-55).

It would have been obvious to one of ordinary skill in the art at the time of invention to texture the substrate taught by Oikawa et al. and thereby optimizing the OR-Mrt of the medium in order to achieve optimal magnetic performance. Such an optimization would have been well within the purview of one of ordinary skill in the art because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

10. Claims 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claims 14-15 are allowable over the closest prior art to Oikawa et al. Oikawa et al. fails to teach or suggest the claimed multi-layered interlayer structure having a second interlayer formed from a Ru alloy material. The prior art fails to teach or suggest a motivation to modify Oikawa et al. to include such a layer.

Response to Arguments

11. Applicant's arguments filed 11/2/06 have been considered but are moot in view of the new ground(s) of rejection.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Holly Rickman
Primary Examiner
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